

# EXHIBIT B

IN THE UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF VIRGINIA  
NORFOLK DIVISION

COLUMBIA GAS TRANSMISSION, LLC, )  
 )  
Plaintiff/Counterclaim Defendant, )  
 )  
v. ) Civil Action No.:  
 ) 2:17cv483  
GROVE AVENUE DEVELOPERS, INC., )  
 )  
Defendant/Counterclaim Plaintiff. )

EXCERPT OF BENCH TRIAL PROCEEDINGS

(Direct Testimony of A. Kvasnicka)

Norfolk, Virginia  
September 19, 2018

BEFORE: THE HONORABLE MARK S. DAVIS  
United States District Judge

Appearances:

REED SMITH, LLC  
By: TRAVIS A. SABALEWSKI  
ALISON R. W. TOEPP  
Counsel for Plaintiff

SINGER DAVIS, LLC  
By: RANDY D. SINGER  
KEVIN A. HOFFMAN  
Counsel for Defendant

I N D E X

WITNESS ON BEHALF  
OF PLAINTIFF:

Page**ANDREW KVASNICKA**

Direct Examination by Mr. Sabalewski.....	3
Redirect Examination by Mr. Sabalewski.....	68
Further Redirect Examination by Mr. Sabalewski...	70

E X H I B I T SPlaintiff's Exhibit No.Received

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P R O C E E D I N G S

(Excerpt begins:)

\* \* \*

MR. SABALEWSKI: I'll be calling Mr. Kvasnicka.

THE COURT: Can you say his name again?

MR. SABALEWSKI: Andrew Kvasnicka.

THE COURT: Kvasnicka?

MR. SABALEWSKI: Yes.

THE COURT: Thank you.

ANDREW KVASNICKA, having been duly sworn, was examined  
and testified as follows:

DIRECT EXAMINATION

BY MR. SABALEWSKI:

Q. Would you please state your name for the record?

A. Andrew Kvasnicka.

MR. SABALEWSKI: If you would display Exhibit 11,  
please?

BY MR. SABALEWSKI:

Q. Mr. Kvasnicka, would you please identify Exhibit 11?

A. That's my resumé.

Q. Mr. Kvasnicka, where did you attend college?

A. Virginia Military Institute.

Q. When did you graduate?

A. 1991.

1 Q. What was your degree in?

2 A. BS in mechanical engineering.

3 Q. What was your first job working with natural gas pipelines?

4 A. First job with natural gas pipelines was with the State  
5 Corporation Commission.

6 Q. When did you work there?

7 A. 1997 to 2005.

8 Q. And did you have a role in relation to enforcing state and  
9 federal regulations at the SEC?

10 A. Yes.

11 Q. What state and federal regulations were you enforcing  
12 there?

13 A. Federal, 49 CFR 192. State, Virginia Underground Utility  
14 Damage Prevention Act.

15 Q. Were you, was part of your responsibility inspecting, doing  
16 field inspections of new underground pipeline facilities?

17 A. Yes.

18 Q. Did you do field inspections that were repairs to existing  
19 pipeline systems?

20 A. Yes.

21 Q. Did you have responsibilities for investigating causes of  
22 damages to underground utilities?

23 A. Yes.

24 Q. What are some of the company's systems that you were  
25 inspecting or investigating in your role at the SEC?

1 A. Commonwealth Gas of Virginia, Virginia Natural Gas,  
2 Washington Gas Light, Atmos Energy, Bluefield Gas, Roanoke Gas.

3 Q. And what kinds of -- how would you characterize those  
4 companies? What kind of companies are those?

5 A. Distribution systems.

6 Q. What size pipelines in the main were you inspecting and  
7 working with those companies on?

8 A. Most of their stuff was plastic half-inch and up to  
9 16-inch.

10 Q. And 16-inch, was that plastic?

11 A. Some, yes. There was some steel in Northern Virginia.

12 Q. And in general, what types of pressure levels do the  
13 distribution lines, these distribution lines operate at?

14 A. Less than 100 pounds.

15 Q. And the smaller half-inch lines that are approaching houses  
16 for delivery, what sort of pressures do those generally operate  
17 at?

18 A. Few pounds.

19 Q. And were some of the pipelines that you -- you said some of  
20 the pipelines were steel that you were responsible for in  
21 connection with your role at the SEC; is that right?

22 A. Yes.

23 Q. Were those coated lines?

24 A. Yes.

25 Q. Cathodically protected?

1 A. Yes.

2 Q. In your role at the SEC, were you present for a number of  
3 pipeline digs?

4 A. Yes.

5 Q. You also have a position in 2009 for Kinder Morgan; is that  
6 right?

7 A. That is correct.

8 Q. What's Kinder Morgan's business?

9 A. Transportation of liquids, like diesel or gasoline and jet  
10 fuel.

11 Q. And what does it transmit those materials through?

12 A. Steel, steel pipelines.

13 Q. Are those coated pipelines?

14 A. Yes.

15 Q. Cathodically protected?

16 A. Yes.

17 Q. And in general what kind of depth were Kinder Morgan's  
18 pipelines?

19 A. Average, probably four feet.

20 THE COURT: Mr. Kvasnicka, could you pull yourself  
21 closer to that microphone or pull the microphone closer to you?

22 THE WITNESS: Yes, sir.

23 THE COURT: Thank you. Do you see how close I am when  
24 I'm talking into it? If you could stay close.

25 A. Yes, sir.

1 THE COURT: Thank you. Go ahead.

2 BY MR. SABALEWSKI:

3 Q. Did you have a role at Kinder Morgan assisting with  
4 launching and monitoring progress of PIGs or in-line inspection  
5 tools?

6 A. Yes.

7 Q. Can you -- and can you describe for the Court what a PIG or  
8 an in-line inspection tool is?

9 A. Generally speaking, there's three types of PIGs. A  
10 cleaning PIG, a geometry PIG and a smart PIG. The smart PIG is  
11 basically a computer and sensors that go through the line. It's  
12 very expensive. So the geometry PIG is the same dimensions as  
13 the smart PIG, and we run it before the smart PIG to ensure the  
14 passage of the smart PIG.

15 Q. And what's the role of the cleaning PIG?

16 A. To get out any debris in the lines so that the smart PIG  
17 will have good sensing capability.

18 Q. And what's the type of information that a pipeline operator  
19 can obtain from running a smart PIG through its pipelines?

20 A. Gathers information on anomalies such as dents, internal or  
21 external wall loss, cracks, manufacturer's defects such as  
22 laminations or inclusions.

23 Q. And does the PIG also provide information about the  
24 location of these issues that it may detect?

25 A. Yes.



1 Q. How does it do that?

2 A. Because of GPS, the PIG knows exactly where it is when you  
3 stick it in the pipeline and exactly where it is when it comes  
4 out of the pipeline, and it can calculate any spot in between.

5 Q. Again, the PIG is running through the line?

6 A. Yes.

7 Q. At about what speed does the PIG run through the line?

8 A. Ideally, four miles per hour.

9 Q. Why is that ideal?

10 A. If it goes too slow or too fast you get bad data.

11 Q. You get bad data about the condition of the pipe?

12 A. Erroneous data that has no value.

13 Q. Have you ever had a role in -- or at Kinder Morgan did you  
14 have a role in assisting in the reading of rectifiers to monitor  
15 cathodic protection?

16 A. Yes.

17 Q. On a high level, can you describe for the Court what  
18 cathodic protection is and sort of how it works?

19 A. Cathodic protection is a technique for controlling  
20 corrosion on a metal surface by making that metal surface a  
21 cathode in an electrochemical cell.

22 Q. And what information does a rectifier reading provide about  
23 the condition of a pipe with a coating?

24 A. The rectifier is for an impressed current system, and  
25 reading the rectifier is confirming that the system does have

1 juice. It is powered up.

2 Q. And at Kinder Morgan were you also present for some  
3 pipeline digs?

4 A. Yes.

5 Q. Did you also at times have a role in even assisting with  
6 the digging itself?

7 A. Yes.

8 Q. You also worked at Dominion Virginia Power; is that right?

9 A. Yes.

10 Q. When was that?

11 A. Let me refresh my memory.

12 '09 to '13.

13 Q. Okay. And briefly you were a land agent; is that right?

14 A. Yes. Dominion also called them right-of-way management  
15 reps.

16 Q. After that for the majority of your time at Dominion you  
17 were an underground project engineer?

18 A. Yes, in the electric transmission department.

19 Q. So you had a role in scoping and planning underground  
20 electricity transmission projects?

21 A. Yes.

22 Q. Can you describe of those facilities?

23 A. Primarily it's a pipe type. It's eight-inch steel pipe  
24 with three conductors with a 200-pound oil bath.

25 Q. 200 pounds of pressure?

1 A. Yes.

2 Q. And what depth in general are were these lines mostly  
3 installed at?

4 A. Primarily five feet deep, but it varies.

5 Q. And did you have a role in the installation of these lines?

6 A. Overseeing the contractors.

7 Q. And with regard to repair work of the pipelines, did you  
8 have a role?

9 A. Yes.

10 Q. Was part of your role assessing cathodic protection and  
11 coatings?

12 A. Yes.

13 Q. Did you have a role also in assessing third-party damage  
14 situations?

15 A. Yes.

16 Q. Can you explain to the Court what a third-party damage  
17 situation is in the industry?

18 A. Typically it's a unauthorized person with mechanized  
19 equipment that inadvertently strikes your utility, usually  
20 resulting in a dent.

21 THE COURT: Can a smart PIG detect damage to the  
22 exterior of a gas pipeline, for example, if it's not making a  
23 dent or, I think you called it an inclusion?

24 THE WITNESS: Right. It can detect dents that are  
25 extremely small, but if there's no dent there, it won't tell you

1 there is one. Typically let's say there's some external  
2 corrosion and half the wall loss is gone, it can pinpoint that.  
3 It might be a one-inch by one-inch square and the PIG can tell  
4 you exactly where to dig it up.

5 THE COURT: So if there is corrosion on the outside of  
6 the pipe versus the inside of the pipe, the PIG running, smart  
7 PIG's running through the inside of the pipe and it can measure  
8 the wall depth, and if there's exterior corrosion it can tell  
9 you that?

10 THE WITNESS: Yes, sir.

11 BY MR. SABALEWSKI:

12 Q. Can you -- what types of repairs are done to coatings of  
13 these types of pipelines, these steel underground cathodically  
14 coated pipelines?

15 A. Repairs to the coating?

16 Q. Yeah.

17 A. We will remove the damaged coating, then you prep it and  
18 replace the coating with whatever's appropriate, whether it's  
19 two-part epoxy or wax wrap.

20 Q. And in your role with Dominion were you present and  
21 involved in a large number of repair digs for pipelines?

22 A. I have been present at repair digs.

23 Q. Now, currently you work for Columbia Gas Transmission as a  
24 pipeline engineer, correct?

25 A. Yes.

1 Q. And you've been so employed by Columbia for a total of nine  
2 years but over two stints; is that right?

3 A. That is correct.

4 Q. What's the business of Columbia?

5 A. Transporting natural gas from Point A to Point B safely and  
6 reliably.

7 Q. And can you generally describe the facilities that Columbia  
8 uses to do that?

9 A. Steel pipelines and compressor stations and M&R stations.

10 Q. Can you explain for the Court what a compressor station is?

11 A. It's, it's a compressor -- hopefully you're familiar with  
12 air compressors for airing up your car tires? It's that on  
13 steroids, and we're compressing natural gas.

14 THE COURT: Is that a method of just keeping it moving  
15 through the line?

16 THE WITNESS: Yes, sir.

17 THE COURT: Okay.

18 BY MR. SABALEWSKI:

19 Q. And at Columbia have you had a role in assisting with PIG  
20 data digs?

21 A. Yes.

22 Q. Can you explain to the Court what that is?

23 A. After you PIG a line, the data is evaluated and the,  
24 depending on what you find out, you may have a urgent dig or a  
25 scheduled dig, and you plan your project and get your people and

1 your equipment together and your permits and go dig up the pipe  
2 where the PIG told you the anomaly is going to be. That's very  
3 oversimplifying.

4 Q. And in a PIG dig, what are sort of the steps once you're  
5 there at the facility and you've got the necessary crew and  
6 equipment?

7 A. You want to make sure the site's safe, whether you're in a  
8 green field or a roadway. Take a pressure reduction if you need  
9 to, hand spot the pipe, open up the hole, slope your trench or  
10 utilize a trench box, pinpoint the anomaly, you know, remove the  
11 coating, sandblast the pipe, inspect the pipe, remeasure the  
12 anomaly to compare it to the PIG data, repair accordingly,  
13 recoat the pipe and backfill accordingly and restore the site to  
14 preexisting condition.

15 Q. Is it sometimes the case that you get to a, you get to the  
16 step of exposing the pipeline and you're inspecting the pipeline  
17 and the anomaly that you were, that the PIG data indicated would  
18 be there is not there?

19 A. Unfortunately that does happen.

20 Q. And why does that happen?

21 A. The PIGs aren't perfect. It might have been going too  
22 slow, it might have been going too fast at that particular  
23 instance.

24 THE COURT: Does it work the other way too, in that it  
25 misses some things that you've also found?

1 THE WITNESS: Yes. For example, it might call out a  
2 50 percent wall loss and we dig it up and it might be  
3 80 percent, 90 percent wall loss. It might call out one  
4 isolated pit, but when we uncover the pipe, it's multiple pits.

5 BY MR. SABALEWSKI:

6 Q. Does also happen that sometimes -- well, are there other  
7 reasons why a repair dig is prompted other than PIG data?

8 A. Leaks. Third parties being observed working in the  
9 right-of-way.

10 Q. How about close interval survey test results?

11 A. Sure. If your CIS data is bad, the corrosion department  
12 might decide to excavate and recoat a section of pipe.

13 Q. And can you explain what a close interval survey is?

14 A. I'm going to back up to, before the close interval survey  
15 you have your pipe to soil readings at test stations.

16 Copper-copper sulphate half-cell electrode, you measure the  
17 millivolt shift in the earth, and if it's -- so do that at your  
18 test stations annually. And then if you have, if those readings  
19 are out of spec, then you would do a close interval survey where  
20 the corrosion tech walks with his copper-copper sulphate  
21 half-cell electrode and takes basically pipe to soil readings  
22 with every other step, and then you analyze your CP.

23 Q. Okay. And sometimes if those readings are bad you would do  
24 a dig?

25 A. Yes.

1 Q. What about third-party crossings with heavy equipment?

2 A. Sometimes unauthorized crossings have been detected, and if  
3 we can identify the equipment, we can run an equipment crossing  
4 data sheet calculation after the fact. Sometimes with large  
5 earth-moving equipment, it fails calculations miserably and the  
6 pipe has been excavated.

7 Q. Okay. And in the course of these other types of digs, is  
8 it sometimes the case that problems are found on these digs that  
9 are, that were not indicated by the existing PIG data on the  
10 segment of line that's at issue?

11 A. Yes.

12 Q. And again, how is that possible, that the PIG data would  
13 have just wholly missed an issue?

14 A. For whatever reason, the PIG didn't pick it up. It was  
15 either going too fast, too slow.

16 Q. Might it also be because the problem arose after the PIG  
17 Run?

18 A. Yes.

19 Q. And when were the last PIG runs on the two pipelines at  
20 issue in this case?

21 A. VM107 was PIGged in 2013 I believe, and VM108 was last  
22 PIGged in 2014.

23 Q. What are some of the different types of pipeline repairs  
24 that you oversee in your role with Columbia?

25 A. Sometimes the repairs are simply a recoat. Sometimes the



1 repair is buffing out the anomaly. Sometimes it's doing a  
2 composite wrap. Sometimes it's a weld oversleeve. Sometimes  
3 you have to cut out the pipe and replace it.

4 THE COURT: How thick are the walls on the two pipes  
5 that are at issue here?

6 THE WITNESS: Quarter-inch. Each of them are a  
7 quarter-inch thick. VM107 is a 12-inch pipe, quarter-inch wall,  
8 and VM108 is 16-inch and a quarter-inch wall.

9 THE COURT: Thank you.

10 THE WITNESS: You're welcome.

11 BY MR. SABALEWSKI:

12 Q. Assisting with these digs, are you often on dig job sites?

13 A. Yes.

14 Q. And you've already testified you were also present on  
15 pipeline digs in your roles for the SEC, Dominion and Kinder  
16 Morgan?

17 A. Yes.

18 Q. Over all your years in the industry working on underground  
19 steel-coated cathodically protected pipelines in these various  
20 roles, what would you estimate is the smallest number of  
21 pipeline digs at which you've been personally present?

22 A. Approximately 300.

23 Q. And of these, what percentage would you estimate is the  
24 smallest percentage that were digs beneath asphalt roads.

25 A. Probably 20 percent.

1 Q. Now, would you agree that the far less than 20 percent of  
2 the pipelines systems that you worked with on these various  
3 roles are under asphalt roads and far more than 80 percent are  
4 beneath, just broadly speaking, green spaces?

5 A. Yes.

6 Q. So what is it that explains that there are that many  
7 more -- or that you have higher a number of or percentage of  
8 digs that you've been present for that have been beneath asphalt  
9 roads?

10 A. I think it's because of the road construction itself, and  
11 then also the road right-of-ways are utility corridors, so  
12 there's a lot more activity around your utility.

13 Q. Do you have a role, have you had a role at Columbia in  
14 reviewing plans for compressor station improvements?

15 A. Yes.

16 Q. And what about reviewing plans to modify points of  
17 delivery?

18 A. Yes.

19 Q. Can you explain to the Court what a point of delivery is?

20 A. A POD is also a measurement and regulation station where  
21 the gas, the gas is cut from the transmission pressure to  
22 distribution pressure, and the gas also changes ownership from  
23 transmission company to the distribution company.

24 Q. And do you have a role assisting when you learn of a, when  
25 Columbia learns of encroachment or have you had a role in

1 Columbia when, at Columbia, in assisting when it learns of  
2 encroachments in the field crossings with heavy equipment or  
3 someone, or other encroachment issues?

4 A. Yes.

5 Q. And how do you assist in these scenarios?

6 A. For the crossings, try to pinpoint the equipment and run  
7 calculations after the fact. For other encroachments,  
8 facilitate their safe removal.

9 Q. And do you also have, have you also had a role in assisting  
10 with pipeline exposure situations?

11 A. Yes.

12 Q. Describe what that is.

13 A. It's typically due to the weather. Excess rain washes off  
14 the soil and pipes become exposed.

15 Q. And have you also had a role in reviewing at Columbia  
16 third-party owner-proposed plans for encroachments in Columbia  
17 easements?

18 A. Yes.

19 Q. What's your main objective in reviewing those plans?

20 A. To facilitate a safe encroachment.

21 Q. Does Columbia require submission of plans for engineering  
22 review?

23 A. Yes.

24 Q. Are you familiar with the federal regulations concerning  
25 natural gas pipelines?

1 A. Yes.

2 Q. Where those found?

3 A. 49 CFR 191 through 195. Primarily it's 192.

4 Q. And how often do you consult these?

5 A. Almost daily.

6 Q. And what are some examples of things that cause you on a  
7 regular basis to need to consult these regulations?

8 A. I mean, just yesterday a project engineer contacted me  
9 about the test requirements of a M&R station, whether he could  
10 have a four-hour hydrotest versus an eight-hour hydrotest.

11 Q. Do you have -- you testified earlier you have some field  
12 experience in physically doing the trenching for underground  
13 steel-coated cathodically protected high-pressure pipelines,  
14 correct?

15 A. Yes.

16 Q. Are you familiar with the regulations controlling how to  
17 safely dig a trench such as are used for trenching and making  
18 repairs on high-pressure natural gas pipelines?

19 A. Yes.

20 Q. Who issues those regs?

21 A. OSHA.

22 Q. On the job sites that you've been present on for excavation  
23 of pipelines, have you at times had responsibility to ensure the  
24 trench is compliant before your repair work begins?

25 A. Yes.

1 Q. And can you generally describe for the Court what is  
2 required for a trench for a repair job in terms of space and  
3 sloping?

4 A. Generally speaking, excavate the pipeline, three feet of  
5 either side of the pipeline, at least a foot below the pipeline,  
6 and then you need to slope back or step back the sides of your  
7 trench so that you can safely work in the trench.

8 Q. And what sort of ratio is the sloping at?

9 A. We treat everything as type C soil, so it's one and a half  
10 to one.

11 Q. And so these are minimums. Does that change based on  
12 variables at the site?

13 A. Yes. You can have an issue with ground water, so you go  
14 deeper and set up a sum pump. Depending on if you need to make  
15 a repair and the repair technique, you may need more room for  
16 your welders.

17 Q. What's the main purpose of digging a safe trench?

18 A. Your safety and the safe repair of the pipeline.

19 Q. Safety of the people doing the repair work?

20 A. Yes.

21 Q. What is a trench box?

22 A. It's a steel, sometimes aluminum box that you put down in  
23 the trench to minimize your trench width so you don't have to  
24 slope back the hole, you can lower a trench box and have a safe  
25 place for your people to work.

1 Q. So does that reduce the overall size of the trench?

2 A. Yes.

3 Q. In what sorts of circumstances is a trench box commonly  
4 used?

5 A. Typically when you're working in a road.

6 Q. And why is it that it's typically used when you're working  
7 in a road?

8 A. To minimize the disturbance of the road so that you can  
9 restore the road.

10 Q. When you're working in a easement aside from the space --  
11 aside from the, for the space needed for the trench itself, what  
12 else do you need the space for?

13 A. Your spoils, the dirt that comes out of the hole. And if  
14 you're in a situation where you need to stop and bypass, you  
15 need room for your bypass.

16 Q. Anything else?

17 A. Your trucks, your welders, all your equipment.

18 Q. And for exposure of a pipeline that's three or four feet  
19 deep, if you're not using a trench box, approximately how wide  
20 would the top of the trench be?

21 A. For one-inch pipeline, three feet deep. The top of the  
22 trench sloped back is probably 16 feet.

23 MR. SABALEWSKI: Your Honor, at this time we'd move  
24 for admission of Mr. Kvasnicka based on his knowledge, training  
25 and experience as an expert in the operation, maintenance and

1 repair of natural gas transmission pipelines.

2 THE COURT: Any questions from the defense?

3 MR. SINGER: No questions, Your Honor. We just would  
4 note that we made a *Daubert* motion in this case. We just wanted  
5 to preserve your motion. But I have no questions.

6 THE COURT: All right. The Court will so recognize  
7 him.

8 MR. SABALEWSKI: If we could go to Exhibit 28, please?

9 BY MR. SABALEWSKI:

10 Q. If you could take a minute and review this exhibit, let me  
11 know when you're ready to discuss.

12 A. Okay.

13 MR. SABALEWSKI: Your Honor, please let me know if  
14 you're having trouble hearing me.

15 THE COURT: It's fine.

16 MR. SABALEWSKI: Thank you.

17 BY MR. SABALEWSKI:

18 Q. Are you familiar with this document?

19 A. Yes.

20 Q. And what is it?

21 A. It's a Code of Federal Regulations, it's 49 CFR 192,  
22 Section 613.

23 Q. And generally speaking, what does this Code section  
24 require?

25 A. Natural gas utility operators having a procedure for

1 Q. What does that section concern?

2 A. Patrolling transmission lines.

3 Q. And for what purpose?

4 A. For safety, for leaks, construction activity.

5 Q. Generally speaking, how does Columbia comply with this  
6 section?

7 A. Aerial patrols and foot patrols.

8 MR. SABALEWSKI: Can we go to Exhibit --

9 BY MR. SABALEWSKI:

10 Q. Well, is there a distinction made here between classes of  
11 pipelines?

12 A. Yes.

13 Q. And what's the distinction in general?

14 A. Well, the class of pipeline is basically based off the  
15 population density of one being green space and a four being  
16 cities. It's more specific than that in the Code section, but  
17 so the Class 3s and 4s is you patrol more often than the 1s and  
18 2s.

19 Q. So there's a regulation that describes how the classes are  
20 divided?

21 A. Yes.

22 Q. If you saw that regulation, would that help you recall the  
23 details --

24 A. Yes.

25 Q. -- of how classes are divided?



1 A. Yes.

2 MR. SABALEWSKI: Can you go to 192.5, please?

3 BY MR. SABALEWSKI:

4 Q. Is this the regulation you're thinking of?

5 A. Yes, it is.

6 Q. So the regulation describes what a class location unit is;  
7 is that right?

8 A. Yes.

9 Q. What is that?

10 A. It extends 220 yards on each side of the pipeline and it's  
11 a sliding mile. And a Class 1 has fewer than 10 buildings  
12 intended for human occupancy, and a Class 2 has 10 or less than  
13 46, and Class 3 has 46 or more.

14 Q. And do you know what the class designation is for the  
15 segments of pipelines at issue on, in this case running through  
16 the property at issue?

17 A. Yes. Class 3.

18 Q. And Class 3 and Class 4 segments are subjected to more  
19 inspections or more frequent inspections than Class 1 or Class  
20 2?

21 A. Yes.

22 Q. Do the Federal Regulations also designate certain areas  
23 as -- or certain segments of pipelines as high-consequence  
24 areas?

25 A. Yes.

1 need to run it together.

2 Q. If you go halfway down the page, it says "Identified site  
3 means each of the following areas." Do you see that?

4 A. Yes.

5 Q. And in Subsection A does this apply to a playground area?

6 A. Yes.

7 MR. SABALEWSKI: Your Honor, I'd note for the record  
8 the parties have stipulated that the segments at issue are  
9 high-consequence areas under this regulation.

10 If we could go to Exhibit 27, please?

11 BY MR. SABALEWSKI:

12 Q. Please review and let me know when you're ready.

13 A. Okay.

14 Q. Generally speaking, what does this section require?

15 A. The annual reading of your test stations and the bimonthly  
16 reading of your rectifiers.

17 Q. This is to access the cathodic protection levels?

18 A. Yes.

19 Q. Does Columbia do this testing consistent with these  
20 requirements?

21 A. Yes.

22 Q. Can you read Subsection D aloud?

23 A. "Each operator shall take prompt remedial action to correct  
24 any deficiencies indicated by the monitoring."

25 Q. What does this require of Columbia?

1 A. If you find an issue, fix it.

2 Q. So if you obtain a bad test result, what do you need to do?

3 A. If your annual pipe to soil readings are bad, then you  
4 follow up with a close interval survey.

5 Q. Is a close interval survey possible through an asphalt  
6 road?

7 A. No, it is not.

8 Q. And so if it's necessary to do a close interval survey  
9 through an asphalt road based on this subsection D, what can  
10 Columbia do?

11 A. You can bore holes in the roadway to get your copper-copper  
12 sulphate half-cell electrode down to soil to a take a reading.

13 MR. SABALEWSKI: If you could go to Exhibit 30,  
14 please?

15 BY MR. SABALEWSKI:

16 Q. Take a minute to review this section. Let me know when  
17 you're ready.

18 A. Okay.

19 THE COURT: Can you also build the road with something  
20 in it? I'm thinking of like manhole covers, things of that  
21 nature, but just allow you to have access to do that kind of  
22 testing for the cathode?

23 THE WITNESS: You can. Our policies do not allow it,  
24 but I know that it's, I've seen it on distribution systems. We  
25 have what we call a curb box.

1 talking about today ending in a cul-de-sac, right?

2 A. Yes.

3 Q. And then on either side are structures. What are those?

4 A. Proposed condos.

5 Q. Okay. And have you determined whether any of those  
6 proposed condos, once built, would be within the potential  
7 impact radius of the pipelines?

8 A. Yes.

9 Q. Would they?

10 A. Yes.

11 Q. Does Columbia have any record that these two pipelines,  
12 VM107 and 108, have been exposed since they were installed?

13 A. Where?

14 Q. Sorry. At the location of this property.

15 A. Not that I'm aware of.

16 MR. SABALEWSKI: Your Honor, it's probably -- you've  
17 already picked up on this, but it's been stipulated these lines  
18 are installed in 1950 and 1961 respectively.

19 THE COURT: All right.

20 BY MR. SABALEWSKI:

21 Q. Have the pipelines been to your knowledge exposed, these  
22 pipelines been exposed at nearby locations?

23 A. Yes.

24 Q. And did you observe the pipelines at these nearby locations  
25 when there were exposed?

1 didn't at those locations?

2 A. I don't recall.

3 Q. Did you run calculations based on the plans to determine  
4 whether the pipelines could be safely operated presuming Grove  
5 Avenue proceeded to build the road?

6 A. I ran wheel load calculations.

7 Q. Did you use a software to run those calculations?

8 A. Yes.

9 Q. Was that software called Pipeline Technical Toolbox?

10 A. Yes.

11 Q. Who created that software?

12 A. Technical Toolbox created it with PRCI's data.

13 Q. What is PRCI?

14 A. Pipeline Research Council International.

15 Q. Other than using this software based on PRCI data, what  
16 other interactions have you had with them?

17 A. I try to attend training with PRCI once a year.

18 Q. Who else attends that training, in your experience?

19 A. People in the industry, pipeline engineers, corrosion  
20 engineers, regulators.

21 Q. Have you, prior to being at Columbia, used the software at  
22 other jobs?

23 A. Yes.

24 Q. Which jobs?

25 A. Dominion. State Corporation Commission.

1 MR. SABALEWSKI: I believe counsel said -- you were  
2 going to seek to admit Exhibits 52 and 53?

3 MR. SINGER: I don't have any objection if you want to  
4 move them into admission.

5 MR. SABALEWSKI: We'd move 52 and 53 in.

6 THE COURT: Admitted.

7 (Plaintiff's Exhibit No. 52 and 53 received  
8 in evidence.)

9 BY MR. SABALEWSKI:

10 Q. Look at 52. Is this one of the wheel load calculations  
11 that you did in connection with this project?

12 A. Yes.

13 Q. And the upper left-hand corner it indicates it's for "As in  
14 place"?

15 A. Yes.

16 Q. It says without flowable fill, correct?

17 A. That is correct.

18 Q. Can you describe for the Court what flowable fill is?

19 A. It's a special mix similar to concrete, but it's not  
20 concrete. It allows for 100 percent compaction, but it also  
21 allows, when mixed correctly, that you can excavate it with hand  
22 tools.

23 Q. So this is basically a screenshot from the software that  
24 you've described?

25 A. It's a screenshot, but it's also a printout.

1 Q. Okay. And is it fair to say at the top in the unbolded  
2 portions are the inputs?

3 A. Yes.

4 Q. And the bottom in the bold are the outputs?

5 A. Correct.

6 Q. Let's walk through some of the inputs.

7 The first row asks for the design class of the pipeline  
8 being analyzed; is that right?

9 A. Correct.

10 Q. Did you input Class 3?

11 A. Yes.

12 Q. Is that based upon the class designations that we talked  
13 earlier, talked about earlier from the Federal Regulations?

14 A. Yes.

15 Q. So that's based on the fact that within the 220 yards of  
16 either side of a sliding mile, the pipeline, this area, there's  
17 46 or more structures intended for human habitation; is that  
18 right?

19 A. It's class -- without having it in front of me, 10 to 46  
20 and 46 or more, yes.

21 Q. And the second line it says that "This provides the maximum  
22 allowable combined stress for this design class." Do you see  
23 that?

24 A. Yes.

25 Q. Is that something you input or is that the something the

1 software puts in place automatically?

2 A. That's something that the software puts in place  
3 automatically.

4 Q. And that's based on the fact that you've inserted design  
5 Class 3; is that right?

6 A. Yes.

7 THE COURT: Well, where does that come from? What  
8 algorithm does it run to generate --

9 THE WITNESS: The 62 percent is the allowable for  
10 Class 3 based off of PRCI's research.

11 BY MR. SABALEWSKI:

12 Q. The next row is for soil type; is that right?

13 A. Yes.

14 Q. And did you -- is there a pull-down menu?

15 A. Yes.

16 Q. And did you select granular materials with cohesion?

17 A. Yes.

18 Q. Why did you select that?

19 A. It is the backfill that's going to give me the best  
20 results, and it closely mimics a road subbase.

21 Q. The next row provides the height or vertical depth and  
22 you've got 3.4 for Line A and 4.3 for Line B. What's that based  
23 on?

24 A. That was the final grade off of the road plans.

25 Q. The next is the trench width. And you have four there.



1 What is that based on?

2 A. These lines were open cut, open trenched when they were  
3 installed.

4 Q. The next line has the weight per unit of volume for  
5 backfill as 130. Did you input that?

6 A. Yes. That's what we use, 130 pounds for cubic foot of  
7 backfill.

8 Q. The next is the specified minimum yield stress of the pipe.  
9 You have 42,000 for Line A. Is Line A is VM107?

10 A. Yes.

11 Q. And you have 46,000 for Line B. Is that VM108?

12 A. Yes.

13 Q. What is that based on?

14 A. Off of the purchase order from the materials. It's the  
15 strength of the pipe.

16 Q. The original purchase order for the pipe back in 1950 and  
17 1961?

18 A. The electronic copies of purchase orders.

19 Q. You've seen a digital copy?

20 A. Yes.

21 Q. Then it has pipe internal pressure, 600. What is that?

22 A. The maximum allowable pressure of these two pipelines.

23 Q. There's the diameter of the pipes. Is that based on the  
24 purchase order again?

25 A. Yes.

1 Q. Thickness of the pipes, is that based on the purchase  
2 order?

3 A. Yes.

4 Q. Next row is concentrated surface load or wheel load. You  
5 have 10,000. What was that based on?

6 A. A VDOT document.

7 Q. Providing what information?

8 A. A non-overloaded truck is allowed 20,000 pounds per axle,  
9 so half of that is 10,000.

10 Q. So that's the maximum that should cross a road if it were  
11 built based on VDOT's standards?

12 A. Yes.

13 Q. Next is Pavement Type, asphalt. That's based on the plans,  
14 I guess?

15 A. Yes.

16 Q. How about the thickness of pavements, what's that based on?

17 A. The plans.

18 Q. And open cut, what makes it appropriate to use open cut  
19 here?

20 A. That's how the two pipelines were installed.

21 Q. Were the pipelines also be exposed in this case based upon  
22 the installation of the water line?

23 A. If the water line crosses us, yes.

24 THE COURT: Is there any variable in here for the  
25 amount of time that the materials have been in place?

1 THE WITNESS: No, sir.

2 MR. SABALEWSKI: If we could go to Exhibit 53, please?

3 BY MR. SABALEWSKI:

4 Q. Now, here are the only differences between -- well, you  
5 tell me, what are the differences between Exhibit 53 and 52?

6 A. The construction type being bored. Versus open cut.

7 Q. And why did you select bored here?

8 A. To mimic having exposed the pipeline and being backfilled  
9 with flowable fill.

10 THE COURT: Walk me through that again.

11 THE WITNESS: If you look down at Line A, it's, we're  
12 going to go all the way down, it's, nothing has changed. It's  
13 design Class 3, it's three to four feet deep.

14 THE COURT: I see it says "Bored" there.

15 THE WITNESS: Okay. That's the only thing that's  
16 changed. And that's -- so I'm telling the computer program that  
17 the pipeline was not open cut, that it was bored in place, which  
18 is what we use to mimic having exposed it and backfilled it with  
19 flowable fill.

20 BY MR. SABALEWSKI:

21 Q. Why is that appropriate?

22 A. Well, it failed the other way, and so...

23 Q. Why does, why does boring mimic the use of flowable fill?

24 A. It's 100 percent compacted. It mimics the ground never  
25 ever having been disturbed.

1 Q. So those are both below 62 percent?

2 A. Yes.

3 Q. That's why it indicates safe to cross the pipeline?

4 A. Yes.

5 MR. SABALEWSKI: Could I have Exhibit 49, please?

6 BY MR. SABALEWSKI:

7 Q. You testified earlier that you have been on at least 300

8 pipeline digs, and 20 percent approximately have been --

9 required excavation through asphalt roads; is that right?

10 A. Yes.

11 Q. So you've been on high-pressure natural gas pipeline

12 project sites dozens of times when excavations through asphalt

13 was required?

14 A. Yes.

15 Q. And many more dozens of times when excavation was done in

16 grassy areas; is that right?

17 A. Yes.

18 Q. Which is more time-consuming and challenging?

19 A. On flat ground, the roads are more challenging.

20 Q. Why is that?

21 A. You need people and equipment to direct the flow of

22 traffic, special tools to cut through the asphalt.

23 Q. Will just any backhoe or bobcat be able to dig through an

24 asphalt road?

25 A. No. You need larger equipment.

1 Q. And when you're dealing with an asphalt road crossing  
2 excavation, what other special equipment is used?

3 A. Typically I call it a target saw. Looks like a circular  
4 saw on steroids.

5 Q. What else -- well, let's talk about the target saw for a  
6 minute. What is the target saw used to do?

7 A. Make a clean cut through the asphalt so that we can  
8 hopefully use a trench box and have a narrow trench and can  
9 restore the road nicely.

10 Q. And when the, does the target saw just do two cuts and --

11 A. No. Cuts the asphalt into manageable chunks for the  
12 excavator.

13 Q. Like ice cubes?

14 A. Yes.

15 Q. And the crew has to excavate beneath the asphalt; is that  
16 correct?

17 A. Correct.

18 Q. Are there any other personal operating the equipment to do  
19 the excavating that are needed in the case of an asphalt road  
20 crossing excavation?

21 A. You need people to direct traffic.

22 Q. Is there any kind of certification required for those  
23 people?

24 A. Yes.

25 Q. And you said you use a trench box. You've described

1 already. So the thing you need, do you need a trench box in  
2 your typical grassy area excavation project?

3 A. No. We would just slope it back.

4 Q. Do you need a target saw?

5 A. No.

6 Q. Do you need traffic personnel?

7 A. Not usually.

8 Q. Does the need for this extra equipment increase the amount  
9 of time that it takes to complete a project?

10 A. Yes. I have to round up the equipment and the personnel to  
11 use it.

12 Q. Actually once you have the right personnel and the right  
13 equipment that you're going to use, does the work itself take  
14 longer to prepare a trench in which to perform a needed repair?

15 A. Yes.

16 Q. And about how much longer in your experience?

17 A. It can be measured in hours.

18 Q. Approximately how many hours?

19 A. I mean, all digs are different. Maybe four to eight.

20 THE COURT: We're talking about with reference to the  
21 plans here before the Court; that is, the plans that were  
22 submitted by the developer?

23 THE WITNESS: If we were to dig up through this  
24 proposed asphalt road it would take us more time than if we had  
25 to dig through this grassy lot as it is today.

1 THE COURT: And again, specifically with reference to  
2 the development proposed by Grove and that road, how much longer  
3 in your estimation?

4 THE WITNESS: Four hours.

5 THE COURT: All right. Thank you.

6 BY MR. SABALEWSKI:

7 Q. Does that -- in an emergency situation does that extra time  
8 matter?

9 A. Sure. Time matters in an emergency.

10 Q. Why?

11 A. Reduce the impact on people and their property and the flow  
12 of gas which impacts commerce.

13 Q. Can you cut through an asphalt road with heavy equipment  
14 when you have a leak situation below the road?

15 A. If there's a gaseous environment we're not going to use  
16 mechanized equipment.

17 Q. So what do you have to do before you can use mechanized  
18 equipment?

19 A. Remove the gaseous environment. Isolate the pipeline  
20 section and blow down.

21 Q. So stop the flow of gas?

22 A. Yes.

23 Q. In a non-emergency situation, say it's a pipeline data dig,  
24 if you -- and it was one that was non-urgent, so it was  
25 scheduled, right? Would that have a negative impact on Columbia

1 that it would need to excavate through an asphalt road?

2 A. I mean, it would still take special tools and more time.

3 But it was scheduled.

4 Q. So what impact would that have on the availability of that  
5 crew that was doing the work?

6 A. Well, those people are pulled away from their normal job  
7 duties.

8 THE COURT: So if it's scheduled, you told me earlier  
9 that this particular project in the road proposed you would  
10 estimate it would take four hours more than if there had not  
11 been a road there and just dirt. So if it was a planned project  
12 or excavation, would it still take four hours or less?

13 THE WITNESS: It still takes time to, you know, do a  
14 nice cut of the road with the specialized tools so that you can  
15 restore the road to nice condition when you're all done.

16 THE COURT: But it's just that you would have  
17 everything, you will know in advance to have everything ready so  
18 it makes sense it would cut down on that time? I'm asking.

19 THE WITNESS: Perhaps. I mean, every situation is  
20 different.

21 THE COURT: All right.

22 BY MR. SABALEWSKI:

23 Q. Four hours that you've testified to and estimated for this  
24 location and that asphalt road according to the plans, is that  
25 just for the work to be done at the time?



1 A. Yes.

2 Q. So there would be additional time in an emergency situation  
3 for getting the equipment to the site; is that right?

4 A. Yes.

5 Q. But for a planned site, to the Court's point, that would be  
6 scheduled, that would be accounted for in the plans, so it  
7 wouldn't, it wouldn't necessarily, it wouldn't add to the time  
8 for doing the work on a non-emergency repair to get the  
9 equipment there, because that would be planned; is that right?

10 A. It would be scheduled, yes.

11 THE COURT: So how much longer to get, in an emergency  
12 to get -- how much longer would it add to the four hours to get  
13 the equipment there?

14 THE WITNESS: Is your emergency Sunday at midnight?  
15 Is your emergency during a hail storm? There's a lot of  
16 variables. It would add time. Can I quantify that time? It  
17 would be very difficult.

18 BY MR. SABALEWSKI:

19 Q. What type of range would you put it in?

20 THE COURT: Let's say best-case scenario. Give me  
21 best case. It's the middle of a work day.

22 THE WITNESS: It's the middle of a work day?

23 THE COURT: Or beginning of a work day.

24 THE WITNESS: Yeah. I'd say best-case scenario is  
25 just a few hours.

1 THE COURT: And if it was just dirt, you're still  
2 going to have that same amount of time to try to find somebody?

3 THE WITNESS: Well, you're not going to be trying to  
4 come up with a target saw to cut asphalt, you're not going to be  
5 coming up with -- you're not going to be very picky and choosy  
6 over your excavator, you're going to take whatever excavator you  
7 can get.

8 THE COURT: So it cuts down on the time?

9 THE WITNESS: Yeah.

10 BY MR. SABALEWSKI:

11 Q. If -- once the townhomes are built, would there be an issue  
12 created for access to the townhomes from Hillpoint Boulevard if  
13 there was, if it was necessary to excavate the road that they  
14 propose to build?

15 A. Yes. A dead-end road, so it's one way in, one way out.

16 Q. So how would -- let's start with a non-emergency situation.  
17 Say it's a PIG data dig. What would be the, what would be done  
18 to accommodate or try to accommodate the concerns of the  
19 residents on the property?

20 A. Try not to dig up the whole road at one time. Try to keep  
21 one lane open for ingress and egress.

22 Q. And how would that be done?

23 A. We'd have people there directing traffic. We'd have steel  
24 plate that covers up the trench if we needed to.

25 Q. So it would be possible to drive over the steel plate; is

1 that right?

2 A. If the need arised, yeah.

3 Q. And a PIG data dig, how many days is a hole open?

4 A. It depends on what you're repairing. It could be a couple  
5 days, it could be a week.

6 Q. And in an emergency situation, would it be treated  
7 differently in terms of the handling of the access of the  
8 property owners?

9 A. In my mind, you still have to keep the roadway partially  
10 open for emergency vehicles. So...

11 Q. And would the need to accommodate with a steel plate the  
12 access to the houses, would that also add time to the repair?

13 A. Yes. Every added a step adds time.

14 Q. And why would that add time?

15 A. You're restoring a travel surface. In order to do that,  
16 you're not doing something else.

17 Q. In addition to what we've discussed so far, what are, are  
18 there other impacts from the construction of the proposed road  
19 on Columbia's operation and maintenance of the pipelines?

20 A. Well, right now through the earth we can do our close  
21 interval surveys, we can use our leak detection equipment. Once  
22 the proposed road is in place, you can't use your leak detection  
23 equipment through asphalt or you can't easily do close interval  
24 surveys through asphalt.

25 Q. What impact does the road have on leak detection?

1 A. The asphalt is a cap. Gas won't migrate through it.

2 Q. So you reviewed these plans and you developed a recommended  
3 strategy for modifying these plans to enable the road to be  
4 built; is that right?

5 A. Yes.

6 Q. What does that involve?

7 A. Excavating the pipelines, inspecting them, correcting any  
8 issues that were discovered, recoating the pipelines, and  
9 backfilling the pipelines with flowable fill.

10 Q. Let's talk a little bit about the inspection part of this.  
11 Why do you have to -- why do you have to remove the coating?

12 A. So you can inspect the steel that's under the coating.

13 Q. And what type -- in this scenario, what type of inspections  
14 would you want to have done of the steel under the coating?

15 A. Magnetic particle inspection of the steel. Also X-ray the  
16 welds.

17 Q. What information would be obtained from a magnetic particle  
18 inspection of the steel?

19 A. Hopefully indicate no presence of cracks, but if we locate  
20 a crack, then we can address it.

21 Q. And what would you do relative to the welds?

22 A. X-ray them.

23 Q. Does, do these things, does magnetic particle inspection  
24 and X-ray of the welds provide you higher quality information  
25 than a PIG run?

1 A. Yes. There's no substitute for examining the pipe in  
2 place.

3 Q. And of course it would also be more current information; is  
4 that correct?

5 A. Yes.

6 THE COURT: Mr. Sabalewski, how much longer do you  
7 have with this witness?

8 MR. SABALEWSKI: Maybe a half hour.

9 THE COURT: How many more witnesses do you have?

10 MR. SABALEWSKI: This is it.

11 THE COURT: This is all? Okay.

12 All right. Well, I'm not making everybody wait until  
13 after 1:30 for lunch, so we're going to take our lunch break  
14 now.

15 I'm willing to work with you all. If you still think  
16 you might finish this by 4:45, I'm willing to take a 30-minute  
17 lunch rather than something longer to facilitate that. But it  
18 sure seems like this is taking a little while.

19 MR. SABALEWSKI: Understand, Your Honor.

20 MR. SINGER: Judge, I don't know we can get done  
21 today. We just -- if this is their last witness we just need to  
22 make sure we get our expert on today, and I think we can do that  
23 either way. I don't see us finishing today at this rate.

24 THE COURT: How many witnesses do you expect?

25 MR. SINGER: We expect three.

1 THE COURT: Okay. All right. Well, we'll compromise.  
2 You all get to do a little more work. We'll take a 45-minute  
3 lunch. See you then.

4 (Recess taken from 1:08 p.m. to 1:57 p.m.)

5 You

6 THE COURT: Yes. All right. Mr. Sabalewski?

7 MR. SABALEWSKI: Thank you, Your Honor.

8 BY MR. SABALEWSKI:

9 Q. Mr. Kvasnicka, before the break we were talking about the  
10 process that you recommend before the road being built be  
11 excavation of pipelines, inspecting the coating, removing the  
12 coating, the inspection of the pipelines, recoating and  
13 backfilling, and in particular we were talking about the  
14 inspection portion once the coating has been stripped and we're  
15 inspecting the steel, talked about magnetic particle inspection  
16 and X-raying of the girth welds. Are there any other types of  
17 testing that would be done while the pipe was stripped of its  
18 coating?

19 A. Yes. We'd probably use sheer weight technology.

20 Q. For what purpose?

21 A. It's going to show things mid-wall. It's like a follow-up  
22 to the magnetic particle inspection.

23 Q. Any other inspections? Naked eye inspections?

24 A. Of course. I'm sorry. I didn't state the obvious.

25 Q. And who does the naked eye inspection?

1 A. NDE tech. A non-destructive examination technician.

2 Q. Is there special training for that?

3 A. Yes.

4 Q. And overall, after you did this, would you have more  
5 information than if you had just done a PIG run?

6 A. Yes.

7 Q. And of course after you did this would you more information  
8 than if you had done a PIG run six years ago or five years  
9 ago --

10 A. Yes.

11 Q. -- as is true in this case?

12 And you testified -- then in terms of recoating of the  
13 pipelines, why do you recoat it?

14 A. Well, if you remove the coating then you can't leave pipe  
15 bare.

16 Q. Is that a requirement?

17 A. Yes.

18 Q. Of what?

19 A. 49 CFR 192.

20 Q. And would you replace it with coal tar coating?

21 A. No.

22 Q. What kind of coating would you replace it with?

23 A. Probably wax.

24 Q. And how does that process work?

25 A. You primer it, apply the wax, and then you provide a

1 protective outer wrap. It's the same coating that's used in the  
2 other three crossings just downstream of this.

3 Q. Would this be a -- is wax a better coating than coal tar?

4 A. It's just as good. It's been around just as long.

5 Q. Would the resulting pipeline by virtue of it having a wax  
6 coating instead of a coal tar coating be improved?

7 A. No.

8 Q. Does Columbia ever engage in projects where it removes  
9 coating in areas where there isn't problems with the coating and  
10 replaces it with wax or replaces, removes coal tar coating in  
11 places where there aren't known problems with the coating and  
12 replaces it with wax coating?

13 A. No.

14 Q. Overall, would excavation of the pipeline, inspecting the  
15 coating, removing the coating, inspecting the steel of the  
16 pipeline and then recoating it result in any improvement in the  
17 pipeline? Just those things by themselves?

18 A. No.

19 Q. The overall scope of work as the Court has referred to it  
20 as mitigation work, we've referred to it as due diligence work  
21 running from exposing the pipeline all the way back to, and  
22 doing all that work between and inspecting between and then  
23 backfilling the pipeline, is it, in your review of Grove  
24 Avenue's plans, did they call for any of that work to be done?

25 A. No.



1 Q. The other side urges that there are nearby road crossings  
2 in the area where Columbia operates its pipelines just fine.  
3 What response do you have to that?

4 A. The three that I'm familiar with, all three were  
5 excavations, coating was removed, on one pipeline the casing was  
6 removed, and then the pipes were inspected and recoated and  
7 backfilled with flowable fill.

8 Q. Were they inspected in the way that we've talked about here  
9 today?

10 A. Yes.

11 THE COURT: Why was the casing removed on that?

12 THE WITNESS: Going back, VDOT required casings of  
13 road crossings but now we've learned that that's where you have  
14 corrosion issues at the transition where pipes come out of  
15 casings. The casings leak. They gather water and you have  
16 corrosion. So now, try to stay away from casings.

17 BY MR. SABALEWSKI:

18 Q. Could you explain what is the casing as relative to the  
19 pipeline itself?

20 A. It's a larger pipe that the pipe carrying the natural gas  
21 is going through.

22 THE COURT: No casings in the pipes we're concerned  
23 with? Or around the pipes we're concerned with --

24 THE WITNESS: Correct.

25 THE COURT: -- on this project?

1 Okay.

2 BY MR. SABALEWSKI:

3 Q. When VDOT has a new road project that will cross Columbia's  
4 pipelines that you review, do you recommend a different approach  
5 than what you've recommended here?

6 A. Well, we look at all the data that's available, the PIG  
7 data, the CIS data, interview the corrosion guys about existing  
8 coating deficiencies, and sometimes it requires a recoating and  
9 flowable fill, sometimes it requires pipe replacement, sometimes  
10 it requires pipe lowering.

11 Q. The other side complains or seems to suggest that you do  
12 not do any testing to reach your result, you just reach the same  
13 conclusion for every road. They claim you were just saying this  
14 is required because Columbia makes you say so. Is that right?

15 A. That is not right. Again, I look at all the data that's  
16 available and try to make the road crossing as safe as it can  
17 be, and sometimes it's just a recoating and flowable fill,  
18 sometimes it's pipe replacement and sometime it's pipe lowering.

19 THE COURT: Well, let's drill down on that point just  
20 a little bit. If their argument -- and maybe you were going  
21 there, but I'm not sure, so I'll ask it -- if their argument --  
22 you know, I asked you earlier whether or not in the program that  
23 you ran reflected in Documents 53 and 54, whether or not there's  
24 any variable included in that, the software or the algorithm for  
25 age of time in place and potential compaction. And their point,

1 their argument here is that they have an expert who says that  
2 disturbing the current compaction after all these years is going  
3 to make it worse. Is that something that you -- I guess my  
4 first question is have you ever heard that argument come from  
5 anyone who had to analyze it in the course of deciding whether  
6 to approve a project?

7 THE WITNESS: I have not heard that argument. Nobody  
8 has pushed back for us to use flowable fill for their road base.

9 THE COURT: So was that argument made to you and then  
10 you had to consider it in this case?

11 THE WITNESS: Kinda sorta made aware of that in this  
12 scenario.

13 THE COURT: Only after the litigation started?

14 THE WITNESS: Yes.

15 THE COURT: So that argument wasn't made to you before  
16 litigation started?

17 THE WITNESS: That is correct.

18 THE COURT: And you've had time, I guess you had time  
19 to think about it and consider whether it has merit, that  
20 argument has merit? Is that outside your wheelhouse? I mean,  
21 you're an engineer, so...

22 THE WITNESS: Well, you've got to balance quantity and  
23 quality. I'm responsible for a lot of pipe. Being here today  
24 is taking me away from a PIG dig in Green County. So I stick by  
25 that we need to dig up these pipes, inspect them, recoat them,

1 and go back with flowable fill to have a safe road crossing.

2 THE COURT: So, but what is your view on this argument  
3 that the soil has been in place for many decades and has  
4 essentially, has 100 percent compaction now, it's just as good  
5 as if you did what Columbia Gas is asking to be done?

6 THE WITNESS: I don't know for certain what has  
7 happened. This place was a farm. That soil was probably tilled  
8 for farming. So I know for sure that the soil was disturbed  
9 when the pipes were laid. I don't know what has happened to  
10 that soil since that time.

11 THE COURT: So does that mean you have doubts about  
12 the compaction because of some depth of tilling?

13 THE WITNESS: Yes. It means that I don't know what  
14 has been done at that green space. I mean, it was a farm for  
15 decades.

16 THE COURT: If you had -- I have no idea of what we're  
17 going to hear, but if you had information that would indicate it  
18 was 100 percent compacted, would that affect your opinion here?

19 THE WITNESS: It would obviously tell me that the soil  
20 is compacted, but it does not allow me to inspect the outside of  
21 the pipe. Inspecting the pipe in place is going to tell us  
22 things that the PIG doesn't tell us. I think for public safety  
23 what we're proposing is the safest thing to do.

24 THE COURT: All right. Mr. Sabalewski?

25 MR. SABALEWSKI: Thank you, Your Honor.

1 BY MR. SABALEWSKI:

2 Q. So even if all of the work you testified is needed were  
3 done, was done, the excavation, inspection, removal of the  
4 coating, inspecting the steel, the recoating, backfilling with  
5 flowable fill, then the road is built on that basis, would the  
6 road still interfere with Columbia's ability to operate and  
7 maintain its pipelines?

8 A. You still can't do a CIS through the road easily. You  
9 still can't use leak detection equipment through the asphalt.  
10 It still delays emergency response.

11 Q. And non-emergency response, right?

12 A. Correct.

13 MR. SABALEWSKI: That's it, Your Honor.

14 \* \* \*

15 THE COURT: How long do you think you'll have?

16 MR. SABALEWSKI: Pretty short.

17 THE COURT: Okay.

18 REDIRECT EXAMINATION

19 BY MR. SABALEWSKI:

20 Q. Mr. Kvasnicka, can you please read the second-to-last  
21 sentence on the first page.

22 A. "Depending on the scope of the project and its impact on  
23 CPG rights-of-way and pipeline facilities, additional  
24 engineering requirements and protective measures may apply."

25 Q. Would you say that this gives property owners notice of the